

Hilcorp Alaska, LLC

Post Office Box 244027
Anchorage, AK 99524-4027

3800 Centerpoint Drive
Suite 1400
Anchorage, AK 99503

Phone: 907/777-8300
Fax: 907/777-8301

March 29, 2019

Alaska Department of Environmental Conservation
Air Permit Program—Attn: Compliance Technician
610 University Avenue
Fairbanks, AK 99709

Subject: Revised 4Q18 Facility Operating Report for Hilcorp Alaska, LLC Milne Point Unit

Dear Compliance Technician,

Hilcorp Alaska, LLC is submitting a revised 4Q18 Facility Operating Report (FOR) for Milne Point Unit to include updated diesel use, vent VOC emissions values, and a drill rig relocation notification. New information is added in red. There were no changes to any attachments included in the FOR submitted on February 15, 2019, except for one additional notification. Therefore, only the additional notification is included.

FACILITY	OWNER REQUESTED LIMIT
Milne Point Unit	AQ0200TVP02 Rev. 4, 200MSS04 Rev. 3, 200MSS05, 200MSS06, 200MSS07

Please contact Julieanna Potter at (907) 777-8444 regarding any questions or concerns associated with the attached documents.

Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete.

Sincerely,

A handwritten signature in black ink, appearing to read 'D. Wilkins'.

David S. Wilkins
Senior Vice President
Hilcorp Alaska, LLC

Enclosure: Facility Operating Report

cc: EPA, Region 10
Julieanna Potter, Hilcorp

HILCORP ALASKA, LLC**Milne Point Unit**

AIR QUALITY CONTROL TITLE V OPERATING PERMIT NO. 200TVP02 Rev. 4, 200MSS04 Rev. 3, 200MSS05, 200MSS06, 200MSS07

FACILITY OPERATING REPORT

FOURTH QUARTER 2018: OCTOBER 1, 2018 through DECEMBER 31, 2018

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FUEL GAS CERTIFICATION (Condition 1.1, 1.3, 6.1, 6.4)

EU IDs 3-6, CP-1, CP-2, and CP-6 burned only gas during the reporting period.

EU IDs 9, 10, CP-4, T-1, T-2, and T-3 are out of service and did not operate during the reporting period.

EU IDs 1, 2, 7, and 8 burned primarily fuel gas during the reporting period. Units have not exceeded their limit of 400 hours of operation per calendar year on diesel fuel.

VISIBLE EMISSIONS (Conditions 2, 4.1, 8.3, 11.1, MSS06 Condition 10.4a)

Three visible emission observations were conducted using Method 9 during the reporting period. Observations and certificates are attached.

Unit	# of Days Observed	Highest 6-Min Average	Dates 6 Minute Average>20%
Boiler 1	1	0%	N/A
Boiler 2	1	0%	N/A
Jet Heater #1	1	0%	N/A

All monitoring and recordkeeping requirements under TVP02 Condition 2 were completed.

DAYLIGHT FLARE EVENTS (Condition 5.4)

No daylight flare events occurred during the reporting period.

Unit	Highest 6-Min Average	Reason for Flare	Event Begin Date/Time	Event End Date/Time	Volume Flared (mscf)
N/A	N/A	N/A	N/A	N/A	N/A

DAYLIGHT FLARE EVENTS NOT MONITORED (Condition 5.3)

There were no daylight flare event observations postponed due to safety or weather reasons, or because a qualified observer was not available during the reporting period.

PARTICULATE MATTER (Condition 8.3, 11.1)

No source tests were required to be performed during the reporting period due to a Method 9 observation with results exceeding the threshold set out in Condition 7.2.

EU ID CP-4 is currently not running and source testing is not required until 180 days after startup. The highest number of operating hours for any 12-month period ending during the period covered by the report is 0.

PARTICULATE MATTER (Condition 8.3, 11.1)

No Method 9 observations were conducted that resulted in an 18-minute average opacity greater than 20% (greater than 15% and not more than 20% if stack is less than 18" in diameter). Therefore, there are no observation results to attach.

Date	Unit	Results
N/A	N/A	N/A

FUEL SULFUR CONTENT (Conditions 13.5, 13.7a, 26.6b, 44.5, 45.3, 49.4, MSS04 Condition 8.1e, 9.4, MSS05 Condition 5, MSS06 Condition 14.1c)12-Month Average Fuel Gas (ppm H₂S)¹Fuel Gas (ppm H₂S)¹

KUTP Diesel Sulfur Content (wt %S)

ULSD Diesel Sulfur Content (ppm H₂S)

October	November	December
21.1	20.4	20.2
17.3	13.7	19.4
0.12	0.12	0.11
< 3	6.1	< 3

¹ H₂S analyzed by hand-held Draeger tube using length-of-stain methodology.

Copies of monthly fuel gas sulfur records and fuel oil sulfur analyses records are attached. (Condition 25.6b, 38.5)

A list of the sulfur content measured for each shipment of liquid fuel received from a third-party supplier are attached. (Condition 13.7a)

A copy of the total sulfur concentration analysis for EU ID 25 regenerator vent gas was reported with the 2Q13 FOR. (Condition 13.3)

INSIGNIFICANT EMISSION UNITS (Condition 14.4c, MSS06 Condition 13.1c)

No emission units considered insignificant exceeded any of the thresholds of 18 AAC 50.326(e) during the reporting period.

NESHAP Subpart ZZZZ (40 CFR 63.6650(f))

No deviations from any emission or operating limitation as defined in Subpart ZZZZ occurred during the reporting period.

GG TURBINE NO_x (Condition 24.10a, 24.10b, 65.4)

EU IDs 1, 2, and CP-4 were not operated with load limits under Condition 24.8d(iii).

EU IDs T-1, T-2, T-3 have not exceeded 400 hours of operation in a 12-month period.

One GG source test was conducted on EU ID 1 on October 22-23, 2018. Executive summary is attached. This EU will be re-tested in March 2019 as a result of subsequent discussions with ADEC regarding source test results.

HILCORP ALASKA, LLC

Milne Point Unit

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OPERATING HOURS ON DIESEL (Conditions 33.2, 50.4, MSS04 condition 10.4)

Unit	Tag No.	October	12-Month Total	Calendar YTD	November	12-Month Total	Calendar YTD	December	12-Month Total	Calendar YTD			
7	H-5701A (diesel)	0.00	115.97	4.85	0.00	115.97	4.85	0.00	115.97	4.85			
8	H-5701B (diesel)	0.00		111.12	0.00		111.12	0.00		111.12			
11	PU-0101A	6.92	229.45		0.72	221.53		0.93	223.27				
12	PU-0101B	6.90			1.05			1.00					
13	PU-0101C	6.90			0.92			1.00					
14	PU-0110A	2.85	53.03		2.00	51.93		2.00	52.25				
15	PU-0110B	2.57			2.00			2.02					
16	PU-4703												
17	PU-2004												

Note: YTD = Year to Date

ROLLING 12-MONTH DIESEL USE AT CFP, B-Pad, and E-Pad in GALLONS (Condition 48.4, MSS04 Condition 8.2d)

Location	Limit	October	November	December
CFP, B & E Pad Diesel	1,000,000.0	107,735.5	137,939.9	168,351.0

DAILY OPERATING SCENARIOS (Condition 51.5, MSS04 Condition 11.5)

October		November		December	
10/1/2018	1	11/1/2018	1	12/1/2018	1
10/2/2018	1	11/2/2018	1	12/2/2018	1
10/3/2018	1	11/3/2018	1	12/3/2018	1
10/4/2018	1	11/4/2018	1	12/4/2018	1
10/5/2018	1	11/5/2018	1	12/5/2018	1
10/6/2018	1	11/6/2018	1	12/6/2018	1
10/7/2018	1	11/7/2018	1	12/7/2018	1
10/8/2018	1	11/8/2018	1	12/8/2018	1
10/9/2018	1	11/9/2018	1	12/9/2018	1
10/10/2018	1	11/10/2018	1	12/10/2018	1
10/11/2018	1	11/11/2018	1	12/11/2018	1
10/12/2018	1	11/12/2018	1	12/12/2018	1
10/13/2018	1	11/13/2018	1	12/13/2018	1
10/14/2018	1	11/14/2018	1	12/14/2018	1
10/15/2018	1	11/15/2018	1	12/15/2018	1
10/16/2018	1	11/16/2018	1	12/16/2018	1
10/17/2018	1	11/17/2018	1	12/17/2018	1
10/18/2018	1	11/18/2018	1	12/18/2018	1
10/19/2018	1	11/19/2018	1	12/19/2018	1
10/20/2018	1	11/20/2018	1	12/20/2018	1
10/21/2018	1	11/21/2018	1	12/21/2018	1
10/22/2018	1	11/22/2018	1	12/22/2018	1
10/23/2018	1	11/23/2018	1	12/23/2018	1
10/24/2018	1	11/24/2018	1	12/24/2018	1
10/25/2018	1	11/25/2018	1	12/25/2018	1
10/26/2018	1	11/26/2018	1	12/26/2018	1
10/27/2018	1	11/27/2018	1	12/27/2018	1
10/28/2018	1	11/28/2018	1	12/28/2018	1
10/29/2018	1	11/29/2018	1	12/29/2018	1
10/30/2018	1	11/30/2018	1	12/30/2018	1
10/31/2018	1			12/31/2018	1

Scenario 1:
 EU IDs 11-13 combined did not exceed 36.0 MW-hrs/day
 EU IDs 14-15 combined did not exceed 12 operating hours per day
 EU ID 17 did not exceed 9.8 MW-hrs/day

Scenario 2:
 EU IDs 1-2 combined did not emit more than 900 lbs SO₂/day
 EU IDs 7-8 combined did not exceed 24 operating hours per day
 EU IDs 11-13 combined did not exceed 36.0 MW-hrs/day
 EU IDs 14-15 combined did not exceed 12 operating hours per day
 EU ID 17 did not exceed 9.8 MW-hrs/day

HILCORP ALASKA, LLC

Milne Point Unit

AIR QUALITY CONTROL TITLE V OPERATING PERMIT NO. 200TVP02 Rev. 4, 200MSS04 Rev. 3, 200MSS05, 200MSS06, 200MSS07

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TURBINE NO_x LOAD LIMITS (Condition 56.1h, MSS04 Condition 16.1h)

Records of DWI usage and load on EU IDs 1 and 2 (PU-0701 and PU-0801) are attached.

Note: Per condition 56.1c, we must comply with the maximum load which demonstrated compliance using fuel gas and diesel of any source test. The 2009 source test conducted on EU ID 2 showed compliance at the loads of 21,036 kW for gas and 20,921 kW for diesel with DWI.

VENT VOC EMISSIONS (Condition 58.2e, MSS04 Condition 18.2e) - 12-Month Rolling Limit: 36.5 tons each

Unit	Location	October	12-Month Total	November	12-Month Total	December	12-Month Total
21	B-Pad	0.02	0.22	0.02	0.22	0.02	0.22
CP-7	C-Pad	0.16	3.77	0.38	3.40	0.01	3.11

FLARE OPERATIONAL LIMIT (Condition 60.4)

Copies of the Flare Operational Log for the reporting period are attached.

TURBINE NO_x (tons) (Condition 61.1e, MSS04 Condition 21.5)

Unit	Tag No.	October	12-Month Total	November	12-Month Total	December	12-Month Total
1	PU-0701 (gas)	84.69	396.72	33.25	404.17	34.70	424.44
	PU-0701 (diesel)	0.17	0.37	0.31	0.65	0.00	0.65
2	PU-0801 (gas)	32.77	212.98	17.00	213.08	16.32	189.40
	PU-0801 (diesel)	0.05	0.10	0.33	0.43	0.00	0.43
Temporary Turbines*		0.00	0.00	0.00	0.00	0.00	0.00
Total Turbine NO_x - Limit: 625 TPY		117.68	610.17	50.89	618.32	51.02	614.91

TURBINE CO (Condition 61.2d, MSS04 Condition 22.4)

Unit	Tag No.	October	12-Month Total	November	12-Month Total	December	12-Month Total
1	PU-0701 (gas)	3.46	18.50	1.21	18.27	1.48	17.70
	PU-0701 (diesel)	0.04	0.08	0.01	0.09	0.00	0.09
Total PU-0701 Turbine CO - Limit: 94.4 TPY		3.50	18.58	1.22	18.36	1.48	17.79
2	PU-0801 (gas)	18.90	74.10	5.46	79.56	6.01	85.57
	PU-0801 (diesel)	0.01	0.01	0.01	0.02	0.00	0.02
Total PU-0801 Turbine CO - Limit: 94.4 TPY		18.91	74.11	5.47	79.57	6.01	85.58
Temporary Turbines*		0.00	0.00	0.00	0.00	0.00	0.00
Total Turbine CO		22.41	92.69	6.69	97.93	7.49	103.37

*Temporary Turbines T1 and T2 were removed from the facility on October 22, 2014.

TURBINE PM EMISSIONS (Tons) (Condition 61.5e, MSS04 Condition 25.5)

Unit	Tag No.	12-Month Total October	12-Month Total November	12-Month Total December
1	PU-0701 (gas)	5.5	5.5	5.5
	PU-0701 (diesel)	0.0	0.0	0.0
2	PU-0801 (gas)	5.5	5.5	5.5
	PU-0801 (diesel)	0.0	0.0	0.0
Total Turbine PM - Limit: 26 TPY		11.0	11.0	11.0

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Closed Vent System- EU 25 (TVP01 Rev 4 Condition 26.2)*	October	November	December
Operating Hours	718.0	656.9	741.3
YTD Operating Hours (2,400 hr/yr minimum)	7,082.8	7,739.7	8,481.0

*AQ0200TVP02 inadvertently removed the requirement to monitor, record, and report the total number of hours the closed vent system was operating during each month and the calendar year to date. The monthly and year to date hours of operation of the closed vent system as required in Condition 26.2 of AQ0200TVP01 Rev. 4.

CEMS (Condition 64.2, MSS04 Condition 31.2)

A CEMS for NOx or CO has not been installed, nor required to be installed, therefore the quarterly report of CEMS data assessment and monitoring systems performance report are not attached.

RELATIVE ACCURACY (Condition 65.4)

One RATA source test was conducted on EU ID 1 on October 22-23, 2018. Executive summary is attached. This EU will be re-tested in March 2019 as a result of subsequent discussions with ADEC regarding source test results.

BACT Source Tests (Condition 54)

EU ID 3 was representative source tested by MPU EU ID 4 on 7/1/2018.

EU ID 4 was source tested on 7/1/2018.

EU ID 5 was source tested on 7/2/2018.

EU ID 6 was representative source test by MPU EU ID 5 on 7/2/2018.

EU ID 7 was source tested on 6/30/2018 and 7/1/2018.

EU ID 8 was representative source tested by MPU EU ID 7 on 6/30/2018 and 7/1/2018.

EU IDs 9 and 10 have been decommissioned and are not operational.

PUBLIC COMPLAINTS (Condition 76.4, MSS06 Condition 24.4)

Number of Complaints	0
Number Requiring Corrective Action	0
Number w/Action in 24 Hours	0
Corrective Action Status after 24 Hours	N/A

SUMMARY OF EXCESS EMISSIONS AND PERMIT DEVIATION REPORTS (Condition 95.3, MSS06 Condition 22.2)

No permit deviations occurred during this reporting period. One permit deviation occurred 6/21/18 and was submitted 7/12/18

Excess Emission or Permit Deviation Reports not previously submitted to the Department (Condition 95.2)

Deviation Date	Units Involved	Permit Condition Affected	Description	Date and Description of Corrective Action/Preventative Measures
N/A	N/A	N/A	N/A	N/A

ADDITIONAL EMISSIONS TESTING OR MONITORING (Condition 95.4)

No emissions monitored under Conditions 1.2, 2.1a(v), 6.2, 12.2, and 24.7 triggered additional testing or monitoring during the reporting period.

Unit	Date of Emission	Permit Condition Affected	Result Triggering Additional Monitoring
N/A	N/A	N/A	N/A

NSPS AND NESHA REPORTS (Condition 97.1)

This report was submitted under separate cover to the EPA, at the same time it was submitted to the Department, to demonstrate compliance with our custom monitoring schedule for fuel gas hydrogen sulfide concentration.

The NSPS Subpart A Excess Emission and Monitoring Systems Performance Reports and Summary Report Form, required by Condition 16 and 17 was submitted to EPA.

Per guidance received 7/18/2013 from Patrick Dunn at ADEC, the reports are not attached because they have already been submitted to the Department. However, additional copies are available upon request.

HILCORP ALASKA, LLC**Milne Point Unit**

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DRILLING OPERATIONS (Condition 38.1, MSS06 Condition 3.1)**Drilling Operations for MPU Pads B, C, and E: 10/1/2018 - 12/31/2018**

Rig	Date	Well	Pad Location
Innovation	11/17/2018- 12/29/2018	E-35	MPU E-Pad
Innovation	12/30/2018 - 2/2/2019	E-37	MPU E-Pad

Projected Drilling Operations for MPU Pads B, C, and E: 1/1/2019 - 3/31/2019

Rig	Well	Pad Location
Innovation	E-37	MPU E-Pad
Innovation	E-36	MPU E-Pad
Innovation	E-41	MPU E-Pad
Innovation	E-40	MPU E-Pad

FUEL SULFUR CONTENT (Condition 45.3, MSS06 Condition 14.1d)

Receipts that specify fuel grade and amount were maintained for each shipment of fuel used on any drill rig. Copies of the fuel receipts are attached.

FUEL CONSUMPTION (Condition 46.1, MSS06 Condition 15.1a, 15.1b(ii))

Maximum fuel rating for each emission unit during in drilling operations and the cumulative maximum fuel rating for all emission units was submitted to the Department with each Relocation Notification.

One relocation notification was submitted on November 8, 2018 and is attached.

Pad	Department Notified
E	11/8/2018

MONTHLY FUEL CONSUMPTION (Gallons) (Condition 47.2, MSS06 Condition 16.1b)

The Innovation Rig includes Tier 2/Tier 3 engines. 12-Month Rolling Limit per well pad: 1,250,000 gal

Rig	Pad	October	12-Month Total*	November	12-Month Total*	December	12-Month Total*
N/A	B Pad	0	0	0	0	0	0
Innovation	C Pad	0	28,334	0	28,334	0	28,334
Innovation	E Pad	0	0	17,597	10,488	30,230	28,505

* Per Condition 16.1a, 12-month rolling fuel use total applies a 0.596 equivalency factor.

Attachment 3. Relocation Notification Form

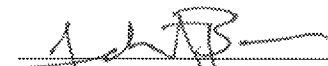
TRANSPORABLE DRILLING RIG RELOCATION/OPERATION NOTIFICATION

The Permittee shall submit the information specified below to the Air Permits Program ten days prior to moving the drilling rig to any of the lease areas identified in Section 1.

1. Rig Name: Innovation Rig
2. Operator's Name: Hilcorp Alaska, LLC
3. Operator's Address: 3800 Centerpoint Dr. Suite 1400. Anchorage, Alaska 99503
4. Contact Telephone Number: Drew Anderson, 907-777-8488
5. Permit Number: AQ0200TVP02 Rev. 3
6. Drilling Location: Milne Point Unit, E Pad
7. Move Date: On or around 11/18/2018
8. Attach a statement that notes any changes that have been made in the rig inventory that deviates from the list contained in Section 8. If no change, then state as such.
A rig inventory is provided with the attached Maximum Fuel Burn Rating submission.
9. Attach an inventory of the rig sources (as identified in Section 8) that provides the exhaust stack diameter of each source, excluding non-road engines, the first time the rig is used by Hilcorp Alaska, LLC at Milne Point.
Exhaust stack diameters are attached.

Certification

Based on information and believe formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete.


(Responsible Company Official)
John Barnes
Printed Name

11/8/18
Date
North Slope Asset Team Leader
Title

Hilcorp Alaska, LLC - Air Quality Control Operating Permit
Permit No. AQTVP0200TVP02 Rev. 3

Innovation Rig

Condition 14.1(a): *Demonstrate compliance by... submitting the maximum fuel rating for each emission unit used in drilling operations and the cumulative maximum fuel rating for all emission units used in drilling operations at a single pad during any 1-hour time period, prior to operation and once per calendar year with the operating report required by Condition 21.*

Emission Unit	Make	Fuel Type	Rating	Maximum Fuel Burn Rate
Generator #1	Caterpillar C-32	Diesel	1,105 kW	72.3 gph
Generator #2	Caterpillar C-32	Diesel	1,105 kW	72.3 gph
Generator #3	Caterpillar C-32	Diesel	1,105 kW	72.3 gph
Generator #4	Caterpillar C-32	Diesel	1,105 kW	72.3 gph
Boiler #1	Williams and Davis	Diesel	125 bhp	38 gph
Boiler #2	Williams and Davis	Diesel	125 bhp	38 gph
Air Heater #1 (Pipe Shed)	Jet Heat	Diesel	15 bhp	5.3 gph
Air Heater #2 (Pipe Shed)	Jet Heat	Diesel	15 bhp	5.3 gph

Maximum Fuel Burn Rate	375.8 gph
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Hilcorp Alaska, LLC – Air Quality Control Operating Permit
Permit No. AQTVP0200TVP02 Rev.3

**Exhaust Stack Diameter for the
Innovation Rig**

9. Attach an inventory of the rig sources (as identified in Section 8) that provides the exhaust stack diameter of each source, excluding non-road engines, the first time the rig is used by Hilcorp Alaska, LLC within the North Slope Drilling area.

Drill Rig	Emission Unit	Make	Exhaust Stack Diameter (in.)
Innovation	Boiler #1	Williams and Davis	18
	Boiler #2	Williams and Davis	18
	Air Heater #1 (Pipe Shed)	Jet Heat	15
	Air Heater #2 (Pipe Shed)	Jet Heat	15